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ABSTRACT

Presented are 24 brief papers prepared by members of the Institute of Defectology in the Soviet Union for a congress on the scientific study of mental deficiency held in Warsaw in 1970. Major papers have the following titles: "Principal Directions of the Study of Anomalous Children in the U.S.S.R.", "Etiopathogenesis and Classification of Oligophrenia", "Psychological Problems of Correctional Education in the Auxiliary School", "The Corrective Education of Mentally Retarded Children of Preschool Age", "A Comparative Characterization of Defect Structure in Monozygotic and Dizygotic Twin Oligophrenes", "An Investigation of Electric Activity of the Brain in Twin Oligophrenes", "On Spelling Disorders in Junior Mentally Retarded School Children", "Specificity of Figurative Activity Instruction at the School for Mentally Retarded Children and Its Psychological Grounds", "Fostering of Interests to Labor in Kindergarten for Mentally Retarded Children", "EEG of Patients with Sex Chromosome Anomalies", "On Social Adaptation of Children with Severe Central Nervous System Disorders", "Some Peculiarities of Voluntary Movements in Mentally Retarded Children of Preschool Age", "Pedagogical Study and Education of Psychologically Backward Children", "Reaction Time Characteristics of Backward Children", "Significance of Adults' Assistance in Solving by Oligophrenic Children of Reasoning Problems of Different Complexity", "The Dependence of Labor Activity of Mentally Retarded School Children on the Apprehension of Its Social and Practical Value", and "Didactic Films in the School for Mentally Retarded Children." (DB)

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INSTITUTE OF DEFECTOLOGY
ACADEMY OF PEDAGOGICAL SCIENCES OF THE U.S.S.R.

SHORT COMMUNICATIONS

PREPARED FOR THE SECOND CONGRESS OF THE INTERNATIONAL ASSOCIATION FOR THE SCIENTIFIC STUDY OF MENTAL DEFICIENCY

(Warsaw, 1970)

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SHORT COMMUNICATIONS PREPARED FOR THE SECOND CONGRESS OF THE INTERNATIONAL ASSOCIATION FOR THE SCIENTIFIC STUDY OF MENTAL DEFICIENCY

(Warsaw, 1970)

PRINCIPAL DIRECTIONS OF THE STUDY OF ANOMALUS CHILDREN IN THE U.S.S.R.

By T.A. Vlasova
(Institute of Defectology, Moscow, U.S.S.R.)

The principal task of the defectological science and practice in the Soviet Union consists in correction and compensation of developmental defects in children.

The highest efficiency of scientific research in the field of mental retardation is achieved within the general system which implies consideration of different developmental anomalies in children because many regularities of development for them are the same. The complex study of all anomalies helps a better solving of the problems of differential diagnostics and of special correctional education for both mentally retarded and otherwise deficient children.

The principle of development is one of the leading methodological principles on which the treatment of problems of defectology is based.

Assuming the leading role of the social environment in the formation of human psychic, the Soviet defectology regards psychic development as a complex dynamic process in which the genotypical and the social form a unity.

Regularities of child's development process, including that of the anomalous child, may be profoundly and properly revealed only on the basis of the dialectical principle of determinedness of all events.

Psychic development passes through a number of stages. At each age stage not only quantitative changes occur, but also new qualities of psychic arise whose system and hierarchy stay for the basic rule of the development, including that under mental retardation.

An abnormal development is determined by a number of factors, above all by the timing and the severity of the primary defect, as well as by aetiology, pathogenesis, localization.

The analysis of development abnormality structure is not possible without a profound study of the specificity of psychic processes in children, of neuropsychological investigation of brain functional state and of higher nervous activity; without a clinical-neurological and special medical study of the child.

Pedagogical study based on the proposition of the leading role played by education in the development is of a special importance. Psychological-pedagogical investigations reveal considerable resources of learning progress and vocational training in all anomalous children, including retardates.

A comparative scientific study of different developmental anomalies which we are working out proves to be efficient not only for the differentiated education of anomalous children in special schools, but also for the study of sources of unproficiency in children with psychophysical infantilism and asthenic states, who attend ordinary schools. The differential diagnostics of such groups of children permits to delimitate them from the retardates.

AETIOPATHOGENESIS AND CLASSIFICATION OF OLIGOPHRENIA

By M.S.Pevzner
(Institute of Defectology, Moscow, U.S.S.R.)

Complex dynamical investigation of oligophrenic children was carried out in order to find the dependence of qualitative features of the defect structure on aetiopathogenesis. Clinical psycho-pathological method was taken as the basis for the investigation which implied clinical, experimental psychological and pedagogical study combined with a number of paraclinical probes (EEG, biochemical, immunological, cytological, radiographic).

The complex dynamical study of various forms of oligophrenia caused by chromosome aberrations, hereditary and exogene factors as well as a comparison of oligophrenia and similar conditions give a good reason to think that defect structure features of oligophrenia are determined by the timing and localization of the damage and its aetiology.

Five forms of oligophrenia were specified according to qualitative features of the defect structure: (1) non-complicated form; (2) oligophrenia with cerebroastenic syndrome, (3) with local injuries, (4) with psychopathic behaviour, and (5) with frontal lobe underdevelopment.

This classification principle has both theoretical and practical importance for the foundation of pathogenetic treatment, corrective education and for the delimitation of oligophrenia from similar conditions.

PSYCHOLOGICAL PROBLEMS OF CORRECTIONAL EDUCATION IN THE AUXILIARY SCHOOL

By J.I.Shif
(Institute of Defectology, Moscow, U.S.S.R.)

Researches of Soviet psychologists prove that, if teaching of debiles is based on a complex formation of their cognitive activities rather than on a mechanical training of feasible elementary acts and skills, a considerable correction of the defect may be achieved. The flexibility of the cortex in such children manifests itself in the principle feasibility of rather complex intellectual activities.

The positive experience of the Soviet auxiliary school and results of psychological studies have helped to define the principles of the developing education in which three successive stages of intellectual development may be specified. Learning difficulties gradually give place to an increasing rate and volume of learning. Some of the senior shool cildren may have developed the ability to apply the acquired knowledge to their learning, labour and practical activities, their self-control and social behaviour skills being furthered.

Clinical and psychological investigations of debile children proved that, within each school class, children may differ in behaviour and activity. Psychological experiments indicate that these pupils may be assembled in different groups depending on children's learning specific for particular school subject. Thus, one of the actual problems of psychology of mentally retarded children at this stage is one of compromise between classroom, group and individual approach to the corrective education, which would take into ac-

count individual data, development stages, as well as curricula restrictions.

Another actual problem consists in the determination of the role played by motivation in the learning efficiency, including the effect of particular motives at different development stages of the debile children.

Finally, progress in behaviour and cognitive activity made by senior-form school children is studied whose unaffected personality components become involved in the system of labour and social orientation.

These are the directions of research carried out now by Soviet psychologists.

THE CORRECTIVE EDUCATION OF MENTALLY RETARDED CHILDREN OF PRE-SCHOOL AGE

By N.G.Morozova

(Institute of Defectology, Moscow, U.S.S.R.)

The study of mentally retarded pre-school children has shown that they may be classified in two groups. On the one hand, the group of children with non-complicated mental deficiency, i.e. without any additional disturbance, should be sungled out. On the other hand, there are children whose mental deficiency is complicated with several speech, motor, sensory, emotional and other disorders.

The corrective education of children who belong to the latter category is aimed mostly at overcoming of the abbitional disorders. Children undergo speech therapy, special gymnastic exercises; they are treated individually to organise their behaviour and activities. Great attention is paid to sensory training, to correction or compensation of perception deficiency. It should be noted that the non-complicated mental retardation may result in secondary developmental deficiencies which also need treatment.

The mental retardation proper effects analysis and synthesis of concrete objects, understanding of simple instructions, may lead to difficulties in unassisted performance of a task for the mentally retarded child is too likely (as compared to the normal one) to slip away from the main course of his activity.

The development rate (ontogenetic and functional) as well as learning of simple tasks is clearly deficient. The nearest development area (L.S.Vygotski) is quite narrow. Children are very slow in grasping and accepting cues given by a teacher or an experimenter whose instruction is seldom followed exactly and adequately. Imitation ability is also poor: the child reproduces mainly the apparent rather than the essential features of the imitated action (so-called mechanical imitation).

Correction of these defects is connected with the organization of the simplest but integral concious acts which are to be partitioned onto elements, first, together with the teacher, then using his cues, and lately unassistedly. After that, the simplest acts are incorporated in a more complex activity supported by positive (of a play or practical) motives and emotions. In this respect, manual work (e.g. manufacturing of toys) is of a great correctional value. Developing of speech and counting also contributes to the mental development of these children.

Immensely important for the correctional education is contact between child and teacher. Pedagogue must win child's credit and favour which are indispensable for the creation of positive social motives of child's activities.

A COMPARATIVE CHARACTERIZATION OF DEFECT STRUCTURE IN MONOZYGOTIC AND DIZYGOTIC TWIN OLIGOPHRENES

By G.P.Bertyn'
(Institute of Defectology, Moscow, U.S.S.R.)

This paper is based on the twin method of investigation. The task was to compare defect features in monozygotic and dizygotic twins and to explore the significance of various endogene and exogene factors in the origin of oligophrenia. Diagnoses were based on the understanding of oligophrenia expressed in works by G.E.Sukhareva and M.S.Pevzner. All twin subjects underwent clinical psychopathological study which included also experimental psychological-pedagogical and logopaedical observation. 68 oligophrenic twin couples and 33 single oligophrenes whose twins died at the delivery or shortly afterwards were studied. In the latter cases it was impossible to establish zygoticity and concordance of the defect.

The investigation of 68 twin couples made it possible to specify a genotypical group whose defect structure might be classified as non-complicated form of oligophrenia. In another group, exogene factors also were established, such as birth injury, early post-natal infections, etc. In these cases the complicated form of oligophrenia was diagnosed.

The clinical study of monozygotic oligophrenes of the genotypical group suggests that similarities in the defect structure may be genetically conditioned because defect structure differences within each twin couple are quantitative rather than qualitative and may be accounted for by some additional factors. Similarity of twins' development and education circumstances at that were taken into consideration.

AN INVESTIGATION OF ELECTRIC ACTIVITY OF THE BRAIN IN TWIN OLIGOPHRENES

By G.P.Dertyn' and L.A.Novikova
(Institute of Defectology, Moscow, U.S.S.R.)

13 monozygotic twin couples (26 children) underwent a complex clinical and electroencephalographic investigation. The genotypic form of oligophrenia was found in 5 couples. Structure of the defect for this group corresponded to the first, noncomplicated form of oligophrenia in the Pevzner classification. EEG showed no deviations from the norm in 2 couples. Small dyadicly correlated deviations - disrhythmia, instability and depression of Alpha rhythm and low-amplitude slow oscillations in central cortex areas - were found in the other 3 couples.

Exogene aetiology was established for 3 couples who had suffered an early foetal injury. Pedigree analysis covering several generations revealed no hereditary defect. Twins of this group had a gross indentical displasticity, dyadicly similar neurological symptoms, severe concordant intellectual deficiency. EEG turned out marked deviations of electric activity in cortical and subcortical structures, which were pair-related. In two twin couples, Alpha rhythm was distroyed, slow pathological waves of Delta and Theta types dominated, bilateral paroxisms were registered. There was either no flickering driving rhythm response or no slow-oscillation displacement of the driven rhythm. EEG also showed an exaggerated and slowly extinguishing secondary response to photic stimulations. For one couple, a hypersynchronised, sharp and irregular Alpha-rhythm was observed in combination with slow waves and epileptoid spindles. Pho-

tic stimulation provoked epileptoid bursts in one of the latter twins.

In 5 monozygotic twins oligophrenia was of a mixed endogene and exogene origin. Deviations in the brain electric activity varied in this group depending on the gravity and structure of the defect.

Thus, the EEG study of monozygotic twins revealed less abnormalities in genotypical forms of oligophrenia. The most severe pathology in EEG (which was an evidence for a grosser defect) was found in exogene cases.

Intra-couple similarity of pathological EEG signs was not restricted just to genotypical cases and remained also for exogene and mixed forms. Observations demonstrate the importance of endogene factors in the development of pathological process and in the tendency of EEG anomalies under oligophrenia.

Some quantitative differences correlated with the severity of symptoms were found within each couple though, quantitatively, changes in EEG, with respect to the character and location of pathological signs, were dyadicly similar.

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ON SPELLING DISORDERS IN JUNIOR MENTALLY RETARDED SCHOOL CHILDREN

By V.V.Voronkova

(Institute of Defectology, Moscow, U.S.S.R.)

During the initial school period the most characteristic misspellings are word distortions originated by insufficiency of phonematic analisis. Several observations and studies (1948, 1949, 1950, 1954, 1967) have shown that such distortions make up some 20 per cent of the whole number of mistakes and are very persistent, lasting even in the senior school forms.

This investigation of writing was conducted in five secondform classes of Moscow schools for mentally retarded children. A dictation technique was used which was based on the main didactic principle: from the simple to the complex. Children had to write isolated words, phrases, sentences and texts which made various degrees of difficulty in phonematic analysis. Phrases, sentences and texts contained the same or phonematically similar words as in the single-word dictations. The results proved to depend but insignificantly on these technique modifications for the subjects. Thus, in the initial analysis, the type of dictation was not taken into account.

Out of 77 pupils investigated, only 7 children made no mistakes, 9 made 1 or 2 mistakes, 10 made up to 5 mistakes, 12 up to 10, 13 - up to 20, 7 - more than twenty, and in 16 cases writing was thoroughly distorted.

Mentally retarded children under study made mistakes mainly in the words which were more dificult for the phonematic analysis. In some cases, however, spelling difficulty increased with the number of phonemes in the word,

even when all the syllables were open while short but phonematicly complicated words (e.g. with series of consonants) made almost no difficulty. Other children made most of their mistakes in words containing consonant series. There were also children who could write difficult words correctly but make mistakes in easy words.

The results suggests that writing difficulties may be of different origins. In some children, they were likely to be tied with some speech or phonematic hearing disorder. In others, with phonematic hearing not affected, mistakes might be caused by the lack of a due training in complex word form perception or by motor disorders. Finally, some mistakes might appear probably because of activity disorders.

Thus, it would be far not enough to state that some mentally retarded children just have dificulties in spelling learning, and the origins of these difficulties must be found in order to eliminate them at early stages of education.

SPECIFICITY OF FIGURATIVE ACTIVITY INSTRUCTION AT THE SCHOOL FOR MENTALLY RETARDED CHILDREN AND ITS PSYCHOLOGICAL GROUNDS

By T.N.Golovina

(Institute of Defectology, Moscow, U.S.S.R.)

The correctional aim of the auxiliary school, conditioned by the psycho-physical development peculiarities of mentally retarded children, is determinant for the specific organisation of their figurative activity instruction. It is important to find the most rational and effective links with other educational methods.

The propaedeutic period should be paved special attention to provide readiness of mentally retarded children to acquiring of different kinds of feasible figurative activities, such as drawing, modelling, appliqué, etc. During this period children not only master elementary figurative means and techniques, but also develop relevant cognitive processes. They gain in ability of purposeful observation and analysis of objects to be depicted, in the discriminative function of colour perception (discrimination and denomination of basic and intermediate hues, practical use of colour), in the volume and stability of attention, in the intensity of interests.

The differentiated approach to the figurative activity instruction according to the readiness level, activity peculiarities, severity of the defect and combination of symptoms is one of the leading principles. For instance, mentally

retarded children whose spacial discrimination disturbances have different features may, in the process of correctional figurative activity instruction, master two-dimension orientation skills, elementary analysis of shape, structure and spacial relations of objects depicted.

The active figurative representation of objects helps to overcome shortcomings of image (e.g. likening, schematization of objects, lack of dynamic, incompleteness, etc.).

Figurative activity, if properly organized, may be a highly effective tool in developing of space imagination which is knownto lag in many retardates.

The correctional figurative activity instruction strengthens links between the concrete and the verbal means of cognition. It is vital for the formation of elementary aesthetic taste and criteria which are never gained spontaneously by most of mentally retarded children.

Essential is the emotional aspect of figurative activity instruction which favours the development of personality of mentally retarded children.

Collective figurative works to which every child contributes according to his ability are very sensible.

FOSTERING OF INTERESTS TO LABOUR IN KINDERGARTEN FOR MENTALLY RETARDED CHILDREN

By Z.K.Guliants

(Institute of Defectology, Moscow, U.S.S.R.)

Cognitive processes in mentally retarded children are poor which results in weakness, narrowness and underdevelopment of their interests (L.V.Zankov, N.G.Morosova). However, developping and fostering of interests is highly significant for correction and compensation of subnormal intellectual activities in mentally retarded children. Investigations of retardates of school age by N.G.Morosova have shown that a positive attitude towards the activity is prerequisite to the corresponding interest. However, there are but few works dedicated to the problem of interests in handicapped pre-school children (Beisman - 1955, Myklebust - 1960, Morosova - 1963, 1967, 1969, Ramonova - 1967). The present research deals with methodological specificity concerning the acquiring of interests to the manual labour by young mentally retarded children. Labour activity not only forwards child's industry and forms his manual skills, but also is known to stimulate versatile sensory activities, to enrich child's conceptual store, to activise his thinking and speech.

Woodwork was chosen for the experiment because it effectively furthers the correction of an eventual motor deficiency and of the physical development in general. The

investigation was conducted in the Special Kindergarten no. 468 of Moscow. Data received from the Special Kindergarten no. 26 of Frunze were also used. 40 senior kindergarten children (of 6 to 7 years) took part in the experiment. No one of them did any woodwork before; so, in this respect, all subjects were equal. A number of parameters suggested by previous investigations and our own observations were specified to discribe child's performance. The set of scores indicated a progress in woodwork skills and a stable positive attitude which were prerequisite to the interests to woodwork.

Such attitude expressed itself in many ways: children were eager work longer and to make more toys, they refused to cease working and to go for a walk, attempted to overcome difficulties without assistance and wanted to be sure that thair performances were correct. The emotional atmosphere was elated. The character of abstractions also showed progress.

The investigation proved feasibility of woodwork training for mentally retarded children. Preconditions of the interest may be created which is greatly important for the future labour training at school.

EEG OF PATIENTS WITH SEX CHROMOSOME ANOMALIES (KLINEFELTER AND SHERESHEVSKI-TURNER SYNDROMES)

By N.N.Zislina and M.M.Rayskaya
(Institute of Defectology, Moscow, U.S.S.R.)

1. A clinical investigation of two sex chromosome anomalies has shown that these patients not only suffer from somatic and endocrine disorders, but also have some typical psychological peculiarities. For the Klinefelter syndrome, these are a decreased psychic activity, low motivation, a specific personality structure (affective instability, a higher suggestability, neurotic symptoms). The Shereshevski-Turner syndrome is characterised by a combination of slight euphoria, emotional instability, insufficient criticism towards the defect, a specific psychological infantilism. Common for the both syndromes is vegetative vessel distonia.

2. Patients of the both categories had EEG deviations from the norm.

3. All Klinefelter syndrome EEGs showed bilateral bursts of Delta and Theta waves, mainly in frontal cortex areas, while Alpha rhythm remained unaffected, its frequency keeping about 10 cps. Under oligophrenia, bilateral bursts arise on the 8 to 9 cps. Alpha rhythm background combined with slow pathological Delta-type waves.

4. For Shereshevski-Turner syndrome, 11 to 12 cps. Alpha rhythm had, in a majority of cases, a highly instable

amplitude and was preceded by long periodes of Betha rhythm in all cortical areas. Some EEGs revealed no Alpha rhythm while all oscillations were flat and persistent unspecified response was observed.

5. The character of EEG deviations in Klinefelter and Shereshevski-Turner cases may be the indication of a meso-diencephalic brain structure disfunction.

6. A comparison of clinical and EEG data indicated that the disfunction of diencephalic structures played certain role in psychological disorders of these types.

ON SOCIAL ADAPTATION OF CHILDREN WITH SEVERE CENTRAL NERVOUS SYSTEM DISORDERS

By M.I.Kuzmitskaya

(Institute of Defectology, Moscow, U.S.S.R.)

Among mentally retarded children there are quite a number of imbeciles, i.e. those suffering from a severe mental deficiency. According to literature, up to 10 per cent of oligophrenic children are imbeciles and about 5 per cent are idiots (i.e. children with the most profound retardation). These children are, in most cases, kept in special institutions run by the Ministry of Social Welfare; some of them get to auxiliary schools; and a considerable part of them remain home and receive no education.

Imbecilic children may differ both aetiologically and symptomatically. In the last few years Ministries of Social Welfare in the Russian, Ukrainian and Lithuanian Republics have been introducing the differentiation of institutions for children with severe mental retardation. Institutions for teachable imbeciles have been made separate. In some of these institutions education and labour training are well organized.

Imbeciles above 18 years are directed to psychoneurological institutions for adults run also by the Republican Ministries of Social Welfare.

Studies carried out at the Institute of Defectology and at the Central Institute for Labour Ability Investigation as well as the experience of some auxiliary schools prove that

children with severe mental deficiency may stay with their families and work in special workshops or do some agricultural job if rehabilitation and education care is correspondingly organized.

SOME PECULIARITIES OF VOLUNTARY MOVEMENTS IN MENTALLY RETARDED CHILDREN OF PRE-SCHOOL AGE

By V.I.Lubovski and V.G.Tereshenko
(Institute of Defectology, Moscow, U.S.S.R.)

The development of voluntary movements in mentally retarded children has not yet been sufficiently studied. The present research was concentrated on the specificity of voluntary movements in mentally retarded children free from pronounced specific motor disorders. Oligophrenic children were tested at the begin as well as at the end of their term at a special kindergarten (i.e. at the age of 4 to 5 and then of 7 to 8 years) in comparison with normal 3 to 5-year-old children.

Several tests of the N.I.Ozeretski (1930) metric scale as well as some Head probes and other hand motorium techniques were used. Children had to perform according to a verbal instruction. If a performance failed, the instruction was repeated in a step-by-step manner and then accompanied by demonstration of the required movements. If that still had no result, the experimenter forced the movements.

Oligophrenic children manifested a significant backwardness in all kinds of the tested movements as compared to the normal subjects, even to tree-year-old ones. Rhythmical movements (such as walking or clapping in time) and both-handed movements proved to be especially hard. The character of the observed disturbances varied: there were coordination deficiency, manifestations of stereotypism

and perseveration, substitution of fine motor differentiations by more rough and diffuse ones, etc.

Significant divergence between the verbal reproduction of the instruction and the motor performance was found, especially in the younger retardates. Verbal response, either in full or part by part, failed in every case even after the instruction was repeated three times. Meanwhile the motor performance according to the simplest instructions was still feasible.

Up to 80 per cent of the senior pre-shool group of oligophrenes reproduced the instruction, but the reproduction was fragmentary and severely distorted. But apart from some distortions, the motor performance was correct in most cases.

Different modifications of the above tests as well as supplementary experiments using conditioning technique make it possible to draw the most efficient methods of voluntary movement training in mentally retarded children.

PEDAGOGICAL STUDY AND EDUCATION OF PSYCHOLOGICALLY BACKWARD CHILDREN

By E.J.Pekelis

(Institute of Defectology, Moscow, U.S.S.R.)

A pedagogical study was undertaken to find the most proper ways of correction of psychological backwardness in poor pupils attending ordinary primary schools. Following methods were used in the research:

1). Analysis of medical and pedagogical documentation concerning children under study.

2). Discussion with parents.

3). Psychological and pedagogical investigation which implied:

- a talk with the child;

- examining of cognition, vision, spacial synthesis, motorium, speech and intelligence (the latter was tested using classification, odd-man-out, metaphor and proverb techniques);

- a study of scholar scills.

Psychologically backward children are characterised by the lack of interests appropriate to their age, of responsibility, of serious attitude to their duty, of proper orientation, as well as by an insufficient ability of mind concentration. All these are manifestations of infantile behavior, or, in the opinion of M.S.Pevzner, those of personality underdevelopment.

Following education methods are regarded most promising:

a). Organizing of child's behaviour to make the child to accept the presented task, to concentrate on it.

b). Discussions about how the task has been performed, during which the child should be suggested that his performance may improve if he invest more effort.

c). Bringing the child to the independent evaluation of his own performance.

d). Motor training.

e). Speech excercises.

Methods applicable to several primary school subjects (such as reading, writing, counting) are described in the body of this report.

In general, the corrective education methods were found favourable for the development of child's personality, extended his motions and interests, and contributed to his better progress at school.

REACTION TIME CHARACTERISTICS OF BACKWARD CHILDREN

By L.I.Peresleni

(Institute of Defectology, Moscow, U.S.S.R.)

Motor reaction latencies were registered in a two-choice situation which implied, for stimuli, combinations of vibrations applied to different parts of subject's body and, for responses, pressing of one of the two contacts. Stimulus duration could be set on 20, 30, 60, 70 or 100 msek. Stimuli of a fixed duration were presented in a random order at least 20 times each.

In the analysis, mean latency, variance and discrimination probability were considered. It was found that the mean latency was higher in backward than in normal children. This result was statistically significant. Variability scores (sample variance and variability coefficient) also proved to be higher for the backward subjects. Unlike the normal children, backward ones showed a decrease in latency as the stimulus duration increased. The dynamic characteristics of discrimination reflected a lower information processing rate in these children.

The analysis reveals sighificant individual differences which may be interesting for diagnostics and rehabilitation.

SIGNIFICANCE OF ADULTS' ASSISTANCE IN SOLVING BY OLIGOPHRENIC CHILDREN OF REASONING PROBLEMS OF DIFFERENT COMPLEXITY

By V.G.Petrova

(Institute of Defectology, Moscow, U.S.S.R.)

In defectological literature, the meaning is widely spread that mentally retarded primary school children are poor in comprehending and use of assistance. As in most cases of exceedingly general statements, this one is not always correct.

In the present study, mentally retarded children of the 2nd form were instructed, first, to describe a visually perceived object, then to do sort of practical analysis of the object and after that to describe the object once again. The original descriprion occurred to be primitive as it should have been expected in junior retardates. The independent performance during the practical analysis proved to exert no influence on the second description in 80 per cent of children, and only 20 per cent of them gainde some cognitive cues out of the practical analysis.

In another session of this experiment, during the practical analysis after each operation performed children were asked questions which induced them to formulate each operation result and to relate it to the considered object. The additional assistance by the experementer made

practical solving of a reasoning problem. So their second description became more complete. All children detected many features and attributes of the object and proved to gain much from the practical analysis.

Two more experiment sessions were conducted in which children had to compare two objects: in the first session, after a silent performance with the objects according to the instruction, and, in the second session, after an induced discussion of particular steps of the performance. Here practical operations, verbalised or silent, occured to be of little value for the comparing of objects.

Thus, the investigation has demonstrated that, under certain conditions, 2nd-form mentally retarded school children may receive and use assistance. This in fact grants the leading role in the child's development to the instruction. The problem is how to define and measure the direction and character of assistance.

THE DEPENDENCE OF LABOUR ACTIVITY OF MENTALLY RETARDED SCHOOL CHILDREN ON THE APPREHENSION OF ITS SOCIAL AND PRACTICAL VALUE

By B.I.Pinski

(Institute of Defectology, Moscow, U.S.S.R.)

Observation and special psychological investigations demonstrate that the activity of mentally retarded children depends on whether they realize the value of their work for other people. A mentally retarded child is greatly pleased when his work is rendered social appreciation and he works on with more vigour and devotion.

This effect was highly pronounced in an experiment during which children had to cut out geometrical figures with a fret-saw. Subjects were 7th-form pupils of an auxiliary school. Each figure was to be cut out twice: first, children worked just to get a score for fretwork skill. Before the second session children were told that their output will serve didactic material for juniors. The check proved that, with the latter instruction, children showed more responsibility in their attitude to the task, acted more rationally and effectively, and achieved better results than in the first case.

Psychological analysis suggests that social involvement of labour activity of mentally retarded school children changes their attitude to what they do. The leading motive is no longer the necessity of fulfilment of a didactic task, but the desire to achieve better results. It helps to

overcome a characteristic, for mentally retarded children, trend to give up when difficulties arise and evokes in them a desire to strive for good work.

DIDACTIC FILMS IN THE SCHOOL FOR MENTALLY RETARDED CHILDREN

By T.I.Porotskaya

(Institute of Defectology, Moscow, U.S.S.R.)

Visuality is one of the leading principles of corrective education of mentally retarded children. Among visual aids, didactic films play a special role. Such films are necessary for the instruction of mentally retarded children. Soviet auxiliary schools (at least 300 schools which have presented the relevant information) have enough facilities to use didactic films. Unfortunately, the equipment is used unsystematicly and insufficiently due to the following causes:

- All didactic films issued are intended for the ordinary school. These aids are too difficult for mentally retarded children and therefore they need to be adapted for use in the auxiliary school.

-No methodological recomendations concerned can be found either in the Soviet or in foreign literature on special pedagogy.

The present research was aimed at finding optimal conditions of the use of the existing didactic films in the instruction of mentally retarded children. The resultst have shown that all types of didactic films (still projection films, silent and talking motion pictures, cine-passages and endless films) contribute, though not equally, to the instruction of retardates.

The experiments show that there must be a differentiated approach to the application of didactic films. One of the results consisted in a less pithy account given by the children of soundfilms than of silent ones. The exception should be made for soundfilms where sound itself was of prior importance (e.g. those featuring an earthquake or a waterfall). Complexity of the contents, duration and explanatoru text were also found important factors of acquiring films material by the children. They profited much more from the film if the sound track was switched off and substituted by teacher's oral remarks. No less important was the moment when films was demonstrated in the course of a particular topic study. It was found that a didactic film had the best effect if demonstrated after a particular topic study to sum up what children had learned.

Theoretical analysis of the problem of didactic films, literature study, pedagogical experience gained for many years, as well as the experimental research make it possible to elaborate and propose a number of recomendations which will promote learning and contribute to personality correction of mentally retarded children.

A CLINICAL STUDY OF CHILDREN WITH TEMPRARY PSYCHOLOGICAL BACKWARDNESS

By M.G.Reidiboim

(Institute of Defectology, Moscow, U.S.S.R.)

The delimitation of oligophrenia from temporary backwardness in psychological development constitutes a difficult problem of the differential diagnostics. Therefore study of temporarily backward children who are somewhere between the normal and the oligophrenic children appears to be vital.

In the present research, 60 temporarily backward children have been investigated. A clinical study of psychological and pedagogical character was undertaken under experimental didactic conditions.

Temporarily backward children manifest emotional and volitional maldevelopment while spacial synthesis and visual perception are unaffected. In some cases, a secondary underdevelopment of verbo-logical thinking occurs.

Three groups of children were studied:

I. Children with psychophysical infantilism and emotional-volitional maldevelopment, but with cognitive activities primarily intact. Children of this group are rare. Their height and weight as well as proportions would fit a younger child of normal physique. Their movements are well coordinated, smooth and childishly graceful. Behaviour depends on whether the child is emotionally interested in the play. Voluntary activity is markedly backward.

2. Children with psychophysical infantilism, emotional-volitional maldevelopment and residual manifestations of some organic disorder in the central nervous system which affects their neurological state. Scull radiogram sometimes indicates disorders in liquor circulation. Infantile behaviour of these children is combined with a secondary decrease in cognitive activity and sometmes with the cerebroasthenic syndrome. This results in instability of attention, higher fatigability, variations in efficiency, fussiness, motor agitation.

3. Children with psycho-physical infantilism and more pronounced speech disorders originated by emotional and volitional maldevelopment via secondary cognitive backwardness.

Presence of residual neurological symptoms in children of the latter two groups as well as anamneses and some laboratory test results suggested that their backwardness had resulted from a residual organic damage of the central nervous system. To check this surmise, an immunological blood analusis was made which included cerebral antigens and antibody probes. The results were largely different from those concerning a control group of intellectually normal children (50 versus 10 per cent).

The investigation has revealed several distinctive features of psychophysical infantilism against the background of mental deficiency. Children with psychophisical infantilism manifest a higher level of visual perception and special imagination, in constructive and visuo-motor probes (tests, Raven matrices). Another important diagnostic sign consists in the ability to use experimenter's cues and to transfer the experience gained in a learning experiment to other tasks.

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PECULIARITIES OF SPEECH UNDER DIFFERENT FORMS OF PSYCHOLOGICAL BACKWARDNESS

By I.A.Simonova

(Institute of Defectology, Moscow, U.S.S.R.)

Analysis of speech of psychologically backward children is highly important since this complex and the most lately developing function reflects multiple aspects of psychical life.

Psychological backwardness is diagnosed on the basis of a through clinical study, including psychological and pedagogical experiments, which reveals a relatively intact intellect. Psychologically backward children may be classified, after M.S.Pevzner, into three groups according to the psycho-pathological data.

To the first group belong mainly children from twin couples for which the anamnesis reveals neither hereditary nor exogene faults. The investigation has shown that these children had a rich vocabulary, their speech being correct both grammatically and emotionally and accompanied by expressive gesticulation. They manifested a specificity rather than a disturbance of speech. Its character depended on the emotional background. Speaking spontaneously or in a conversation when no task performance restrictions existed, they easily formulated their thoughts and used complex grammatical constructions. However, when a precise, logical answer was required they were verbous and failed to restrict themselves to the topic. Generalisation could appear but as the result of speaking aloud. Thus speech of these children re-

vealed the immaturitu of what L.S.Rubinstein called "personality component", as well as the underdevelopment of speech regucation.

Children of the second group are characterized by a stronger backwardness of a residual organic background. The anamnesis of the majority of these children had revealed a latency in speech development. Most speech distortions concern its sensual aspect. Their speech reflects a low level of cognitive activities. Conceptual limitations result in poor vocabulary, several word meanings remaining undifferentiated and many generic words lacking.

In the third group, psycho-physical infantilism is complicated with speech disorderd. Emotional and volitional immaturity, lack of organisation and of critical attitude to the defect hamper rehabilitation.

Determination of speech specificity of psychologically backward children may help to find the most appropriate correction methods.

PROBLEM OF REWARD IN PROGRAMMED INSTRUCTION OF MENTALLY RETARDED CHILDREN

By P.G.Tishin

(Institute of Defectology, Moscow, U.S.S.R.)

For the traditional classroom instruction system, following shortcomings are characteristic:

- the most advanced pupils are engaged in the learning process only a part of the lesson time;
- pupils fail to receive immediate reinforcement at the end of each performance;
- it is difficult to single out the hardest parts of the curriculum for individual pupils.

Programmed instruction is one of the ways to fill these gaps and to raise learning efficiency. Under the programmed instruction, learning in mentally retarded children may be studied at every stage and it is possible to return to least acquired stages at any moment. Another principle faculty of the programmed instruction consists in the immediate reinforcement of correct answers.

An immediate reinforcement arithmetic problem teaching device was tested with mentally retarded primary school children as subjects. The experimental lessons have shown a positive didactic effect. These lessons lead by J.S.Salova in Leningrad, L.G.Andronova in Moscow, M.A.Arnoldov in Kiev, and others have demonstrated that a reasonable combination of traditional methods and elements of the programmed instruction (optimal time for the latter was some 15 or 20

minutes per 45-minute lesson) made lessons more interesting and efficient while children became much quicker in acquiring the material than if only traditional methods are applied.

CONCRETE THINKING IN MENTALLY RETARDED PRE-SCHOOL CHILDREN

By G.V.Cykoto

(Institute of Defectology, Moscow, U.S.S.R.)

The corrective treatment of oligophrenic children must begin at the earliest possible age. Feasible forms of thought with respect to the young mentally retarded children are to be found, and understanding and solving by them of elementary reasoning tasks are to be studied. The development of concrete thinking is a necessary stage in the child's mental development, which provides the transition from the sensation and perception to the concept formation.

Play is known to be the leading activity of pre-school children, including those mentally retarded, and may be used as a didactic tool and as a means of mental development.

In the present study, children were diven concrete reasoning tasks in a play situation in order to investigate specificity of their thought in this highly motivated cativity mode. Both verbal and non-verbal tasks were used. Non-verbal tasks required colour discrimination and generalisation. Although colour vision was intact in all cases, mentally retarded children made many mistakes when, in a play situation, they had to discriminate, identify or classify objects according to their colour. The number of mistakes was greater when no colour pattern was in sight and only an abstract image remained. However, that difference was less than expected which might be due to children's inability to make use of visual means. Mentally retarded pre-school children usually solved tasks in most primitive ways. In both cases, retardates performed much worse than normals.

Verbal tasks were used to investigate understanding of verbally presented elementary situations, to see if children could operate with images of familiar objects or to do some performance with toys according to the verbal description. A simple play situation was presented in three simple sentences. Its inderstanding was checked with one or more questions which were to be responded by naming or pointing a toy. Among IO mentally retarded 3 to 4-year-old subjects, only one responded properly. The performance with toys was a failure in all cases, and children at best could but follow direct instructions which they could not tie with the whole of situation. Experimenter's cues during the play helped them to make sense of what had been said before. After the performance with toys the original text was presented anew and, this time, it was understood by 5 out of IO children. Thus, simple performances with toys were helpful in actualising of images of familiar objects, acts, relations, and created a kind of unity between image and word. However, it does not mean the ability of the children to operate adequately with the images: they failed in a similar control task.

Retardates of 7 or 8 as well as normal 3-year-old children performed well in the above tasks (including the control one). This suggests that there are resources of concrete thought development in mentally retarded pre-school children.

A CLINICAL STUDU OF POSTERIORITY OF OLIGOPHRENES

By V.F.Shalimov

(Institute of Defectology, Moscow, U.S.S.R.)

This paper is based on a clinical and experimental psychological and pedagogical investigation of children whose either one or both parents suffer from oligophrenia. Children's pedigrees were traced. In addition to this, both children and their parents underwent laboratory and EEG probes. Aetiology of the defect in parents was compared with features of psychological deviation in their children. Marriage type and psychic condition of parents were also taken into account.

50 families with at least one oligophrene parent were under study, among them 27 families with the second parent nirmal (group I), I2 families with the second parent mentally ill (group II), and 11 families where the second parent was either oligophrene or a norm/oligophrenia border case (group III). The whole number of children studied was 83, 50 of school and 33 of preschool age. 35 children belonged to the family group I. 6 of them were found oligophrenes, 5 psychologically backward, 5 border cases and 19 apparently normal. The second family group consisted of 33 children: 11 oligophrenes, 5 psychologically backward, 9 border cases and 8 normal. Among I5 children of the family group III 11 were diagnosed oligophrenes and the rest had minor psychological deviations.

When exogene factors prevaled in the parents' aetiology

the number of oligophrenes depends on the marriage type. For instance, children of oligophrene/normal parential background were predominantly (92 per cent) normal and never oligophrenes. But if the second parent was mentally ill or retardate, the share of normal children fell to 25 per cent. The above-mentioned dependence was found even stronger when parents' oligophrenia was predominantly hereditary. Here marriages of oligophrene/normal type might yield oligophrenic children. The percentage of retardates among children rises up to 91 given oligophrene/oligophrene marriage type. Psychic deviations in oligophrenes' posteriority occurred to be diverse and highly dependent on aetiology. Marriage type also proved to have an effect on the severity of these disturbances.

SIGNIFICANCE OF MOTOR DISTURBANCES IN MENTALLY RETARDED CHILDREN

By M.B.Zydinova

(Institute of Defectology, Moscow, U.S.S.R.)

The adequate motor development of the child plays a great role in accumulation of cognitive experience. Thus, when the motorium of a mentally retarded child is impaired special pathogenetically grounded rehabilitation measures are needed. An attention should be paid to the rate and exactness of movements performed by the extremities and facial and articulatory muscles. The formation of child's motor functions is closely linked with that of visual perception. For instance, a one-month-old baby luing on his back can see objects placed at no more than one-meter distance. At the age of 2 or 2.5 months the baby can keep its head straight, and its visual perception range extends to 2 or 2.5 meters. At the same time concentration of vision for 1 to 1.5 minutes becomes possible. When the child gains the ability to turn from his back to his belly he can see up to 4 or 5 meters while vision concentration reaches 5 to 7 minutes.

Development of such functions as sight fixation, concentration of attention on extremity movements, re-direction of attention from one movement to another, is highly important. Sight fixation impairment is connected with sincipital or sincipitooccipital injuries. Movement shift disorders are indicatory for a premotor injury localization. Learning in the child with premotor disfunction (areas 6

and 8), especially when it is complicated with mental deficiency, is severely affected due to discontinuity in eyes' movement and, as a consequence, due to sight shifting difficulties. Sincipital and sincipito-occipital injuries which result in sight fixation difficulties also hamper learning.

These disturbances need correction directed at rehabilitation of the affected functions. Treatment is concentrated upon sight fixation training, exercises in moving object tracing, spacial and temporal orientation, which constitute another problem concerning retardates. Meanwhile such exercises are adequate afferentations in premotorial and sincipital areas and will be helpful in rehabilitation and further development of the affected functions. The use of such normalizing medicines as Galactamin, Pyrogenol, Gamnalon, vitamines B-12 and B-15 may speed up the process of rehabilitatio.

CLINICAL CHARACTERIZATION OF INBORN FORMS OF OLIGOPHRENIA

By V.M.Yavkin

(Institute of Defectology, Moscow, U.S.S.R.)

The purpose of this paper is to consider the causes of familial forms of oligophrenia and their clinical features. The investigation was restricted to families with at least two ologophrenic siblings.

The contingent of 96 auxiliary schools numbering 18, 259 children was analysed. It was found that familial cases make up 8.6 per cent of the population investigated.

A comparative clinical study involving, among others, paraclinical methods and pedigree analysis was carried out on 209 children from 92 families. This led to the following classification of familial oligophrenia cases: 1) hereditary forms (147 children, 61 families, 66.3 per cent); 2) exogene forms (41 children, 17 families, 18.4 per cent); 3) unclear aetiology cases (21 children, 14 families, 15.2 per cent).

Pedigree analysis suggested that, within the first group, the character of oligophrenia inheritance may vary. A very similar clinic in two or three siblings (severe forms of mental deficiency in one cases, complication of oligophrenia with some local disorders such as cataract or optic nerve atrophy in others) may indicate the recessive character of the defect, each family being clinically specific.

A dominant inheritance was likely for families in which oligophrenia could be traced in several generations or if oligophrenic children were born in several marriages of the

same mentally retarded parent.

In some families, besides oligophrenic and intellectually normal individuals, a certain number of learning difficulty or social non-adaptability cases (which might be regarded as indirect indications of a low intelligence) were discovered among siblings, parents and other relatives. Probably here we have to do with a poligeneous inheritance of oligophrenia.

Clinical picture in dominant and poligeneous cases should be qualified as that of the non-complicated form of oligophrenia (after Pevzner classification).

Among the exogene cases, two forms were specified:

- inborn syphilis form characterised by cognitive under-development, similar to that in debiles, combined with gross disorders of emotional-volitional sphere;

- toxoplasmose form under which children suffered from a severe mental retardation (imbecility or profound debility) with speech, motor and emotional- volitional disorders.

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